CONTRACT REPORT NO. 79166-10-SQ

CHEMICAL ANALYSES OF ORE TAILINGS

REFERENCE MATERIAL

Final Report

by

LAKEFIELD RESEARCH
A Division of Falconbridge Limited

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MICROMEDIA

4pf

SUMMARY OF METHODS USED

ELEMENT GROUP # 2

Total Sulphur: Oxidation of all sulphur to sulphate with a mixture of Br_2-HNO_3-$HClO_4$. Subsequently precipitated as $BaSO_4$.

Sulphate Sulphur: Digestion in dilute HCl to disolve sulphates. Insoluable matter filtered off and sulphate precipitated as $BaSO_4$.

Carbonate (CO_2): For RTS -1, -2, and -3: evolution of CO_2 with HCl, absorption on KOH. CO_2 determined gravimetrically. For RTS -4, problems were encountered using this procedure. Instead, CO2 was evolved using acetic acid and the amount of CO_2 produced was determined using a gas burette.

Moisture: Determined by measuring weight loss after drying in an oven at 105° C for 3 hours.

ELEMENT GROUP # 5

Platinum, Palladium and Gold: Fire assay, inquarting in silver. Dissolution of the silver bead in aqua regia and determination of Pt, Pd, and Au by ICP spectrometry.

ELEMENT GROUP # 2

Canmet Reference		% S	% SO_4	% CO_2	% H_2O
RTS - 1	A	1.68	3.64	<0.05	1.55
	B	1.65	3.71	<0.05	1.42
	C	1.65	3.66	<0.05	1.46
	D	1.65	3.73	<0.05	1.45
	E	1.67	3.68	<0.05	1.33
	F	1.70	3.68	0.06	1.38
RTS - 2	A	18.89	11.33	<0.05	1.87
	B	18.99	11.35	<0.05	1.77
	C	18.84	11.39	<0.05	1.71
	D	18.60	11.56	<0.05	1.55
	E	19.03	11.57	<0.05	1.55
	F	18.82	11.54	<0.05	1.55
RTS - 3	A	9.91	4.59	<0.05	2.02
	B	9.90	4.54	<0.05	1.86
	C	9.80	4.58	<0.05	1.98
	D	9.92	4.61	<0.05	2.00
	E	9.94	4.55	<0.05	1.92
	F	9.96	4.55	0.06	1.90
RTS - 4	A	35.06	0.82	0.69	0.25
	B	35.05	0.76	0.73	0.21
	C	35.14	0.79	0.67	0.22
	D	35.11	0.82	0.73	0.21
	E	35.30	0.82	0.69	0.22
	F	35.16	0.79	0.69	0.20

Note: Values are on an "as received " basis.

ELEMENT GROUP # 5

Canmet Reference		Au, g/t	Pt, g/t	Pd, g/t
RTS-1	A	0.332	0.009	<0.007
	B	0.270	<0.007	<0.007
	C	0.267	<0.007	<0.007
	D	0.234	<0.007	<0.007
	E	0.242	0.008	<0.007
	F	0.256	<0.007	<0.007
RTS-2	A	0.010	0.201	0.135
	B	0.020	0.200	0.121
	C	0.017	0.219	0.137
	D	0.020	0.185	0.131
	E	0.030	0.184	0.132
	F	0.013	0.209	0.128
RTS-3	A	0.236	<0.007	<0.007
	B	0.213	<0.007	<0.007
	C	0.316	0.008	<0.007
	D	0.237	0.008	<0.007
	E	0.234	<0.007	<0.007
	F	0.236	<0.007	<0.007
RTS-4	A	<0.007	0.089	<0.013
	B	<0.007	0.090	<0.013
	C	<0.007	0.063	<0.013
	D	<0.007	0.075	<0.013
	E	<0.009	0.085	<0.017
	F	<0.007	0.092	<0.013